Role of the Energy Commission

Joint Reliability Plan - Track 2 Workshop

San Francisco, California

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Michael R. Jaske
Energy Assessments Division
Mike.Jaske@energy.ca.gov / 916-654-4777

Scope

- CEC's Integrated Energy Policy Report
- CEC Staff Local Capacity Analyses
- Connection to Track 2 Goals

CEC's IEPR

Integrated Energy Policy Report (IEPR)

- Biennial, completed in odd years with an update in even years
- Scope can be very broad (electricity, natural gas, and transportation fuels) and somewhat elastic depending upon the issues
- Electricity and natural gas assessments always included in some manner, especially demand forecasts
- Historic energy data filing requirements for all LSEs
- Forecast filing requirements for some LSEs

LSE Filing Requirements

- IOUs, POUs and CCAs >200MW peak actual in 2013/14:
  - 10 year peak and energy demand forecasts
  - 10 year energy balance table, 10 year capacity balance table, details on supply contracts
- POUs<200MW peak in 2013/14:
  - 3 year peak and energy demand forecasts
  - 3 year energy balance table, 3 year capacity balance table, details on supply contracts

LSE Filing Requirements, cont'd

- ESPs >200MW peak actual in 2013/14:
  - 5 year peak and energy demand forecasts
  - 5 year energy balance table, 5 year capacity balance table, details on supply contracts
- IOUs, CCAs and ESPs <200MW peak actual in 2013/14:
  - No filing requirements

CEC Demand Forecast Variants

Version	Geographic	Weather	Time Increment	AAEE Adjust.
System	3 of 8 CEC planning areas add to ISO	1:2 or 1:5 peak demand typically used in studies	Annual/monthly peaks and annual energy	With and w/o AAEE
Local	CEC Form 1.5 disaggregates to UDC areas	1:10 August peak demand used in ISO studies	Annual 1:10 peak demand usually sufficient	With and w/o AAEE
Flexibility	3 of 8 CEC planning areas add to ISO	Monthly 1:2 peaks provided to ISO	8760 hourly loads needed for production simulation, but in development	AAEE adjustment translated by fcst user into hourly impacts

CEC Demand Forecasts

- CEC staff prepares its own independent demand forecasts in parallel to LSEs
- Staff prepares several iterations within an IEPR cycle
- LSE forecasts and supplemental information frequently influence staff's revisions
- After workshops/hearings, the Energy Commission ultimately adopts a demand forecast

Local Capacity Assessments

Reliability Assessment Methods

Version	Methods	Implementation Issues	Modeler
System	Supply/demand balances satisfying PRM	Methods are simple, but assumptions are difficult	CEC, CPUC, ISO, IOUs
Local	Local capacity studies using power flow and stability models	Complexity of studies limits number of cases that can be assessed	ISO, PTOs, consultants
Flexibility	Evolving toward stochastic production simulation to determine load following and ramping requirements	No consensus about methodologies and no standards for determining how much is needed	ISO, IOUs, CPUC/ED, consultants

Reliability Assessment Issues

Version	Key Issues	Analytic Challenges
System	Level of imports	Rest of WECC not represented directly
Local	Impacts of transmission upgrades	Transmission shifts generation from local to zonal/system
	Ability to count upon customer-side of the meter policy impacts	Much greater granularity of projections and ability to assure participation
Flexibility	Level of stress to use in defining flexibility requirements	Stochastic distribution of inputs and resulting probability distribution of results should guide need

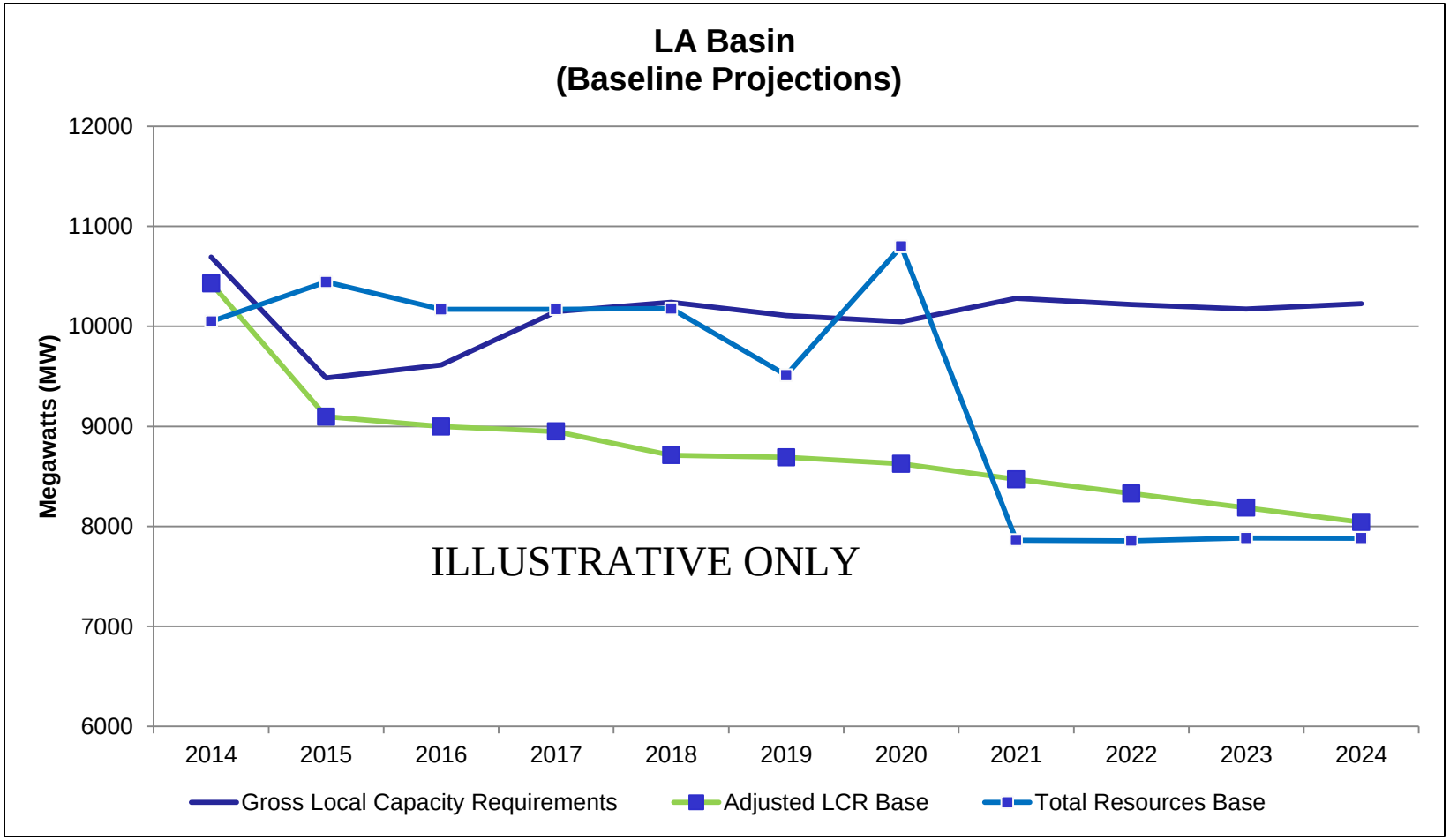
Southern California Focus

- Capacity loss from retired OTC units and air quality issues in developing inbasin replacement
- As a result of SONGS outage/retirement, agencies working together on reliability in Southern California
- Key elements:
  - Close tracking of preferred/conventional additions
  - Monitoring transmission system upgrades
  - Developing contingent resources, if needed
  - Annual local capacity projection tool to supplement ISO LCR studies

CEC Local Capacity Efforts

- Developing a spreadsheet tool -- LCAAT -- to annualize ISO LCR studies
- Currently configured to track resources, demand and local requirements for five areas:
  - Combined LA Basin/SD subarea
  - LA Basin local area
  - West LA subarea
  - SD/IV local area
  - SD subarea
- Can be extended to other local capacity areas

Illustrative Results



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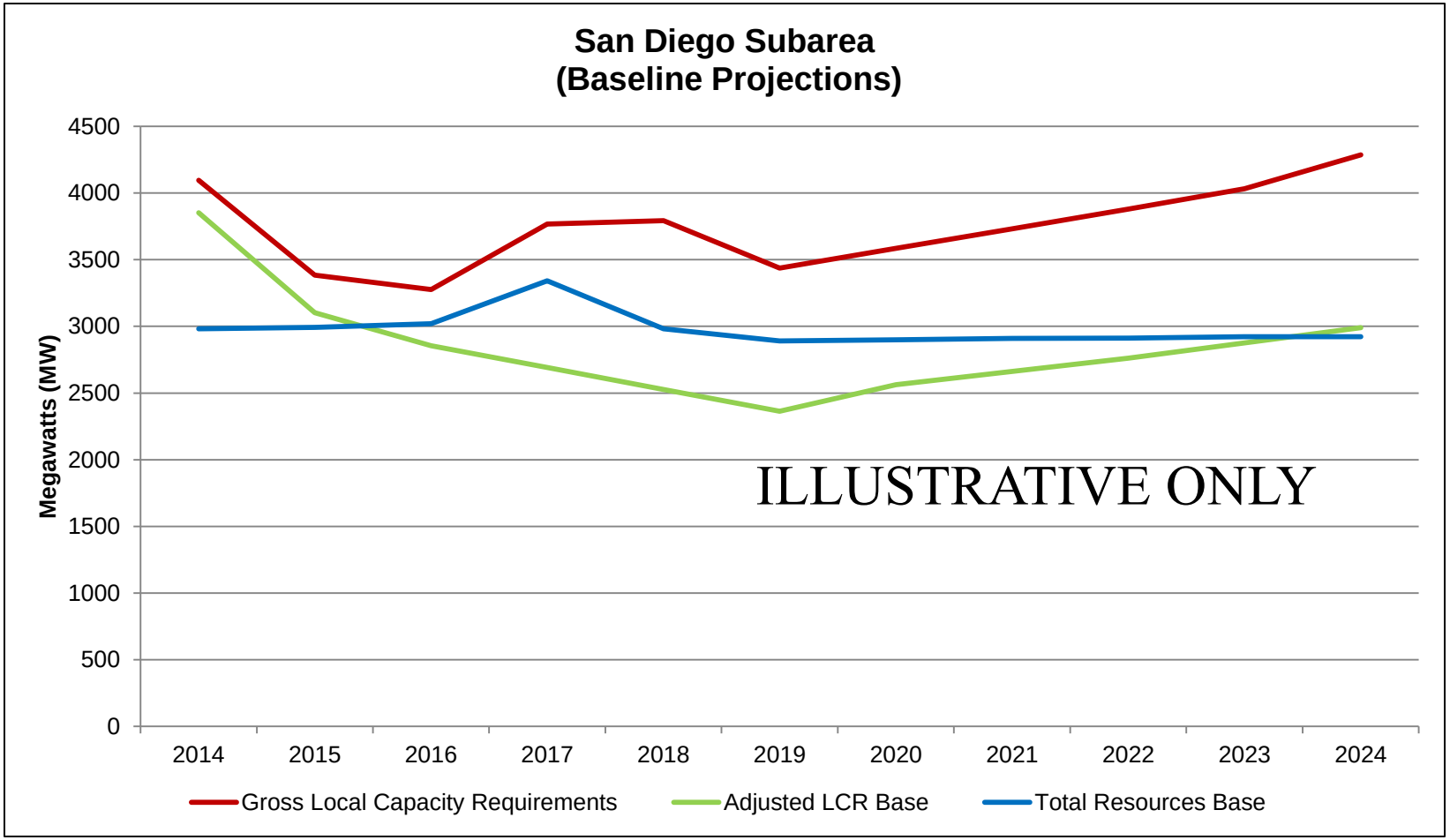

CEC Support to Track 2

- Projections for POUs within the ISO BAA are important for proper analyses
- CEC demand forecasts are now being used in CPUC LTPP and ISO analyses, so they should also be used for Track 2 projections
- CEC's Local Capacity Annual Accounting Tool (LCAAT) fills a gap that ISO LCR studies have been unable to satisfy, and is generally consistent with the CPUC LTPP and ISO TPP

Questions?